

**UNITED STATES DEPARTMENT OF COMMERCE****Patent and Trademark Offic**Address: COMMISSIONER OF PATENTS AND TRADEMARKS
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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
09/183,819	10/30/98	BAKER	T 60980005DXH9

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EXAMINER	
HUFFMAN, J	
ART UNIT	PAPER NUMBER
	2853

DATE MAILED: 09/26/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary	Application No.	Applicant(s)
	09/183,819	BAKER ET AL.
	Examiner	Art Unit
	Julian D. Huffman	2853

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 10 July 2001.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-36 and 42-51 is/are pending in the application.
- 4a) Of the above claim(s) 37-41 is/are withdrawn from consideration.
- 5) Claim(s) 19,20,22-25 and 27-36 is/are allowed.
- 6) Claim(s) 1-6,9-13,26,42 and 44-49 is/are rejected.
- 7) Claim(s) 7,8,14-18,21,43,50 and 51 is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) The proposed drawing correction filed on _____ is: a) approved b) disapproved by the Examiner.
 If approved, corrected drawings are required in reply to this Office action.
- 12) The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All b) Some * c) None of:
1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) The translation of the foreign language provisional application has been received.
- 15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____ |

Claim Objections

1. Claims 8 and 14 are objected to because of minor informalities:

In claims 8 and 14, the phrases "low velocity" and "low positioning accuracy" are relative terms and may not be clear. It is suggested that applicant claim that the velocity and positioning accuracy is less than a certain amount.

2. Claim 21 is objected to because it depends from itself.

In examining this claim, it was assumed that applicant intended dependency from claim 20.

Appropriate correction is required.

Election/Restrictions

3. Claims 37-41 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected species, there being no allowable generic or linking claim. Election was affirmed **without** traverse in Paper No. 7.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

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5. Claim 9 is rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

The specification does not describe moving the sensor in contact with the media, but rather the sensor housing or hood of the sensor, such that ambient light does not interfere with the sensing operations.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1-2 are rejected under 35 U.S.C. 103(a) as being unpatentable over Beauchamp (U.S. Patent 5,883,646) in view of Vincent (U.S. Patent 5,671,059).

Beauchamp discloses an incremental printer for forming desired images on a printing medium, by construction from individual marks in arrays; said printer comprising:

at least one colorant-placing module for marking on the medium (fig. 2, any one of elements 302, 304, 306, or 308); and

a first sensor for determining condition or relative positioning of the at least one colorant-placing module (element 400).

Beauchamp does not disclose a second sensor for making color measurements.

However, Vincent discloses a sensor mounted to a carriage for making color measurements (column 4, lines 36-56).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the sensor disclosed by Vincent into the invention of Beauchamp for the purpose of correcting for color errors caused by dynamic changes in the printing mechanism or the characteristics of the media (column 4, lines 36-46).

8. Claims 3-5 and 11-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Beauchamp in view of Vincent as applied to claim 1 above and further in view of Hirano et al. (U.S. Patent 5,018,884)

Beauchamp in view of Vincent do not disclose that the second sensor is mounted independently of the first sensor and on a second carriage which is detachable from the first carriage.

However, Hirano et al. provides a general teaching for solving a similar problem as the applicant, that is, reducing weight by providing two modes, the first mode allowing one carriage mounted device to traverse along the print media and the second mode allowing a second device mounted on a separate carriage to be attached to the first carriage such that both devices may be traversed along the print media (abstract).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the teachings of Hirano et al. into the invention of Beauchamp in view of Vincent, thereby employing the use of the dual separable/attachable carriages taught by Hirano et al. and, instead of mounting both sensors "on" the same carriage, mounting one sensor on each carriage, for the purpose of, as taught by Hirano et al., reducing weight during normal printing operations by allowing the use of two modes, one where both carriages are traversed along the print media and another where only one carriage is traversed.

9. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Beauchamp in view of Vincent as applied to claim 1 above and further in view of Vincent (U.S. Patent 5,272,518).

Beauchamp in view of Vincent '671 do not disclose a hood for covering the device.

Vincent '518 discloses the use of a hood surrounding a colorimeter for excluding ambient light from the sensor (column 9, lines 33-38).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the teachings of Vincent '518 into the invention of Beauchamp in view of Vincent for the purpose of preventing stray light from interfering with the detection process.

10. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Beauchamp in view of Vincent as applied to claim 1 above and further in view of Lloyd et al. (U.S. 5,508,826).

Beauchamp in view of Vincent do not disclose providing a reference target to the sensor.

Lloyd et al. discloses a self-calibrating color printer and further teaches that first a sensor is calibrated by scanning a reference target, then test patches printed by the printer are sensed to correct printing operations (abstract).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the teachings of Lloyd et al. into the invention of Beauchamp and Vincent, that is the use of a standard reference target within the movement range of an optical sensor mounted in a printer, for the purpose of providing a means to calibrate the sensor.

11. Claim 26 is rejected under 35 U.S.C. 103(a) as being unpatentable over Beauchamp et al. (U.S. 5,448,269) in view of Bauer et al. (U.S. 5,255,009).

Beauchamp et al. discloses :
an ink drop placing module;
at least one sensor with an optical surface for measuring characteristics of printed images; and

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an automatic microprocessor for using characteristics measured by the sensor to refine operation of the ink drop placing module to optimize the quality of images (abstract).

Beauchamp et al. does not disclose a door for protecting the surface of the sensor when not in use and a mechanism for automatically opening the door before use of the sensor and closing the door after use of the sensor.

However, Bauer et al. discloses this (column 8; lines 7-20).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the teachings of Bauer et al. into the invention of Beauchamp et al. for the purpose of protecting the sensor from contaminants.

12. Claims 42 and 44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Beauchamp ('646) in view of Lloyd et al.

Beauchamp discloses:

a colorant-placing module (302);

a sensor for measuring color properties of colorant marked on the media by the colorant-placing module (400); and

a moving carriage for automatically positioning the sensor over colorant on the medium (300).

Beauchamp does not disclose a reference target.

Lloyd et al. discloses a self-calibrating color printer and further teaches that first a sensor is calibrated by scanning a reference target, then test patches printed by the printer are sensed to correct printing operations (abstract).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the teachings of Lloyd et al. into the invention of Beauchamp and Vincent, that is the use of a standard reference target within the movement range of an optical sensor mounted in a printer, for the purpose of providing a means to calibrate the sensor.

13. Claim 45 is rejected under 35 U.S.C. 103(a) as being unpatentable over Beauchamp ('646) in view of Lloyd et al. as applied to claim 44 above and further in view of Bauer et al.

Beauchamp in view of Lloyd et al. do not disclose a shutter for protecting the reference target and means actuated by the carriage for controlling the shutter.

However, Bauer et al. discloses a shutter (127) for protecting a reference standard of an optical sensor (125) when it is not in use (column 6, lines 54-55 and column 8, lines 7-20).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the teachings of Bauer et al. into the invention of Beauchamp and Lloyd to obtain the invention claimed for the purpose of protecting the elements from contamination by ink or the like.

14. Claims 46-49 are rejected under 35 U.S.C. 103(a) as being unpatentable over Beauchamp ('646) in view of Lloyd et al. as applied to claim 42 above and further in view of Granger (U.S. 6,058,357).

Beauchamp in view of Lloyd et al. do not disclose the reference targets claimed.

However, Granger discloses a means for updating the standards of a densitometer by scanning reference patterns (column 9, lines 33-43).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the teachings of Granger into the invention of Beauchamp in view of Lloyd et al. for the purpose of providing standard color values to a sensor so that it may be calibrated.

Response to Arguments

15. The applicant's argument that neither Beauchamp or Vincent suggests using both a colorimeter and a line sensor is noted. The colorimeter and line sensor are subsystems; no interaction between the two is claimed and each can function independently of the other. Beauchamp discloses the limitations found in claims 1 and 2 with the exception of a second sensor for making color measurements. As taught by Vincent, a colorimeter advantageously corrects for color errors resulting from changes in the printing mechanism or characteristics of the media. One having ordinary skill in the art at the time the invention was made, would have recognized the advantages provided by the colorimeter disclosed by Vincent and would have found it obvious to

combine Beauchamp and Vincent to obtain the claimed invention. Thus, though the prior art individually does not teach the use of both a colorimeter and a line sensor, the advantages of both are well known, they function independently of one another, and Beauchamp and Vincent teach their combination.

The applicant's argument that the art teaches away from the combination is not persuasive. The Beauchamp reference never mentions that the sensor disclosed is capable of functioning as both a line sensor and a colorimeter. It merely discloses a line sensor for pen alignment.

In response to applicant's suggested argument that the examiner has combined an excessive number of references, reliance on a large number of references in a rejection does not, without more, weigh against the obviousness of the claimed invention. See *In re Gorman*, 933 F.2d 982, 18 USPQ2d 1885 (Fed. Cir. 1991).

In response to applicant's argument that the Hirano et al. reference is nonanalogous art, it has been held that a prior art reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the applicant was concerned, in order to be relied upon as a basis for rejection of the claimed invention. See *In re Oetiker*, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992). In this case, both the applicant's invention and Hirano et al. are in the ink jet printer field and both are concerned with the reduction of weight and employ auxiliary carriages as a solution.

In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies

(i.e., the low positioning accuracy of the colorimetric sensor) were not recited in the claim(s) rejected in the prior action. Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

In response to applicant's statement that the Thermagon reference is not of record, this reference was cited on the 892 Notice of References Cited, the citation can be found adjacent the letter U, under the heading "Non-Patent Documents".

Applicant's additional arguments are mute in view of the new grounds of rejection.

Allowable Subject Matter

16. Claims 7-8, 21, 50, 14-18, 43 and 51 would be allowable if corrected to overcome the objections found above and written in independent form to include all of the limitations of the base claims and any intervening claims.

17. Claims 19-20, 22-25, 32, 27-31 and 33-36 are allowed.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Julian D. Huffman whose telephone number is (703)

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308-6556. The examiner can normally be reached on Monday through Friday from 9:30 a.m. to 6:00 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Barlow, can be reached on (703) 308-3126. The fax phone number for the organization where this application or proceeding is assigned is (703) 308-7722. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.



JH

September 21, 2001



John Barlow
Supervisory Patent Examiner
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